



No. TN0029718

Modification

Authorization to discharge under the
National Pollutant Discharge Elimination System (NPDES)

Issued By

**Tennessee Department of Environment and Conservation
Division of Water Pollution Control
401 Church Street
6th Floor, L & C Annex
Nashville, Tennessee 37243-1534**

Under authority of the Tennessee Water Quality Control Act of 1977 (T.C.A. 69-3-101 et seq.) and the delegation of authority from the United States Environmental Protection Agency under the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977 (33 U.S.C. 1251, et seq.)

Discharger: **Lynwood Utility STP**
is authorized to discharge: **treated domestic wastewater from Outfall 001**
from a facility located: **in Franklin, Williamson County, Tennessee**
to receiving waters named: **Harpeth River at mile 77.9**

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective on: **December 1, 2003**

This permit shall expire on: **July 31, 2006**

Issuance date: **November 19, 2003**

A handwritten signature in blue ink, appearing to read "Paul E. Davis".

for

Paul E. Davis, Director
Division of Water Pollution Control

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PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Lynwood is authorized to discharge treated domestic wastewater from Outfall 001 to the Harpeth River at mile 77.9. Discharge 001 consists of municipal wastewater from a treatment facility with a design capacity of 0.4 MGD. Discharge 001 shall be limited and monitored by the permittee as specified below:

Effluent Characteristics	Effluent Limitations						Monitoring Requirements		
	Monthly Average Conc. (mg/l)	Monthly Average Amount (lb/day)	Weekly Average Conc. (mg/l)	Weekly Average Amount (lb/day)	Daily Maximum Conc. (mg/l)	Daily Minimum Percent Removal	Measurement Frequency	Sample Type	Sampling Point
CBOD ₅ (May 1 - Oct. 31)	5 Report	17	7.5	25	10 Report	40 %	3/week 3/week	composite composite	effluent influent
CBOD ₅ (Nov. 1 - April 30)	10 Report	33	15	50	Report	40 %	3/week 3/week	composite composite	effluent influent
Ammonia as N (May 1 - Oct. 31)	2	7	3	10	4		3/week	composite	effluent
Ammonia as N (Nov. 1 - April 30)	5 Report	17	7.5	25	10		3/week	composite	effluent
Total Nitrogen (May 1 - Oct. 31)	3.0	10	4.5	15	6		2/month	composite	effluent
Total Phosphorous (May 1 - Oct. 31)	Report						2/month	composite	effluent
Suspended Solids	30 Report	100	40	133	45 Report	40 %	3/week 3/week	composite composite	effluent influent

Note: The permittee shall achieve 85 % removal of CBOD₅ and TSS on a monthly average basis. The permittee shall report all instances of overflow and/or bypasses. See Part 1.D.5a for reporting requirements.

Effluent Characteristics	Effluent Limitations			Monitoring Requirements		
	Monthly Average	Daily Minimum	Daily Maximum	Measurement Frequency	Sample Type	Sampling Point
Fecal Coliform	200/100 ml (see the following paragraphs)		1000/100 ml	3/week	grab	effluent
<i>E. coli</i>	126/100 ml (see the following paragraphs)			3/week	grab	effluent
Chlorine residual (Total)			0.03 mg/l instantaneous	5/week	grab	effluent
Settleable solids			1.0 ml/l	3/week	composite	effluent
Dissolved oxygen		6.0 mg/l instantaneous		5/week	grab	effluent
pH (Standard Units)		6.5	9.0	5/week	grab	effluent
Flow (MGD)	Report Report		Report Report	7/week 7/week	continuous continuous	influent effluent

The wastewater discharge must be disinfected to the extent that viable coliform organisms are effectively eliminated. The concentration of the fecal coliform group after disinfection shall not exceed 200 per 100 ml, nor shall the *E. coli* concentration exceed 126 per 100 ml as the geometric mean based on a minimum of 10 samples, collected from a given sampling site over a period of not more than 30 consecutive days with individual samples being collected at intervals of not less than 12 hours. For the purpose of determining the geometric mean, individual samples having a fecal coliform or *E. coli* group concentration of less than one (1) per 100 ml shall be considered as having a concentration of one (1) per 100 ml. In addition, the concentration of the fecal coliform group in any individual sample shall not exceed 1,000 per 100 ml.

There shall be no distinctly visible floating scum, oil or other matter contained in the wastewater discharge. The wastewater discharge must not cause an objectionable color contrast in the receiving stream.

The wastewater discharge shall not contain pollutants in quantities that will be hazardous or otherwise detrimental to humans, livestock, wildlife, plant life, or fish and aquatic life in the receiving stream.

Sludge or any other material removed by any treatment works must be disposed of in a manner that prevents its entrance into or pollution of any surface or subsurface waters. Additionally, the disposal of such sludge or other material must be in compliance with the Tennessee Solid Waste Disposal Act, TCA 68-31-101 et seq. and the Tennessee Hazardous Waste Management Act, TCA 68-46-101 et seq.

For the purpose of evaluating compliance with the permit limits established herein, where certain limits are below the State of Tennessee published required detection levels (RDLs) for any given effluent characteristics, the results of analyses below the RDL shall be reported as Below Detection Level (BDL), unless in specific cases other detection limits are demonstrated to be the best achievable because of the particular nature of the wastewater being analyzed.

For CBOD₅ and TSS, the treatment facility shall demonstrate a minimum of 85% removal efficiency on a monthly average basis. This is calculated by determining an average of all daily influent concentrations and comparing this to an average of all daily effluent concentrations. The formula for this calculation is as follows:

$$\left[1 - \frac{\text{average of daily effluent concentration}}{\text{average of daily influent concentration}} \right] \times 100\% = \% \text{ removal}$$

The treatment facility will also demonstrate 40% minimum removal of the CBOD₅ and TSS based upon each daily composite sample. The formula for this calculation is as follows:

$$\left[1 - \frac{\text{daily effluent concentration}}{\text{daily influent concentration}} \right] \times 100\% = \% \text{ removal}$$

B. MONITORING PROCEDURES

1. Representative Sampling

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to insure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to insure that the accuracy of the measurements is consistent with accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than plus or minus 10% from the true discharge rates throughout the range of expected discharge volumes.

Samples and measurements taken in compliance with the monitoring requirements specified above shall be representative of the volume and nature of the monitored discharge, and shall be taken at the following location(s):

Influent samples must be collected prior to mixing with any other wastewater being returned to the head of the plant, such as sludge return. Those systems with more than one influent line must collect samples from each and proportion the results by the flow from each line.

Effluent samples must be representative of the wastewater being discharged and collected prior to mixing with any other discharge or the receiving stream. This can be a different point for different parameters, but must be after all treatment for that parameter or all expected change:

- a. CBOD₅ samples can be collected before chlorination to avoid having to dechlorinate and seed the samples.
- b. The chlorine residual must be measured after the chlorine contact chamber and any dechlorination. It may be to the advantage of the permittee to measure at the end of any long outfall lines.
- c. Samples for fecal coliform can be collected at any point between disinfection and the actual discharge.
- d. The dissolved oxygen can drop in the outfall line; therefore, D.O. measurements are required at the discharge end of outfall lines greater than one mile long. Systems with outfall lines less than one mile may measure dissolved oxygen as the wastewater leaves the treatment facility. For systems with dechlorination, dissolved oxygen must be measured after this step and as close to the end of the outfall line as possible.
- e. Total suspended solids and settleable solids can be collected at any point after the final clarifier.
- f. Biomonitoring tests (if required) shall be conducted on final effluent.

2. Sampling Frequency

Where the permit requires sampling and monitoring of a particular effluent characteristic(s) at a frequency of less than once per day or daily, the permittee is precluded from marking the "No Discharge" block on the Discharge Monitoring Report if there has been any discharge from that particular outfall during the period which coincides with the required monitoring frequency; i.e. if the required monitoring frequency is once per month or 1/month, the monitoring period is one month, and if the discharge occurs during only one day in that period then the permittee must sample on that day and report the results of analyses accordingly.

3. Test Procedures

- a. Test procedures for the analysis of pollutants shall conform to regulations published pursuant to Section 304 (h) of the Clean Water Act (the "Act"), as amended, under which such procedures may be required.
- b. Unless otherwise noted in the permit, all pollutant parameters shall be determined according to methods prescribed in Title 40, CFR, Part 136, as amended, promulgated pursuant to Section 304 (h) of the Act.
- c. Composite samples must be proportioned by flow at time of sampling. Aliquots may be collected manually or automatically. The sample aliquots must be maintained at 4 degrees Celsius during the compositing period.

4. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The exact place, date and time of sampling;
- b. The exact person(s) collecting samples;
- c. The dates and times the analyses were performed;
- d. The person(s) or laboratory who performed the analyses;
- e. The analytical techniques or methods used, and;
- f. The results of all required analyses.

5. Records Retention

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed and calibration and maintenance of instrumentation shall be retained for a minimum of three (3) years, or longer, if requested by the Division of Water Pollution Control.

C. DEFINITIONS

The "**instantaneous minimum concentration**" is the minimum allowable concentration, in milligrams per liter, of a pollutant parameter contained in the wastewater discharge determined from a grab sample taken from the discharge at any point in time.

The "**instantaneous maximum concentration**" is a limitation on the concentration, in milligrams per liter, of any pollutant contained in the wastewater discharge determined from a grab sample taken from the discharge at any point in time.

The "**daily maximum concentration**" is a limitation on the average concentration in milligrams per liter, of the discharge during any calendar day. When a proportional-to-flow composite sampling device is used, the daily concentration is the concentration of that 24-hour composite; when other sampling means are used, the daily concentration is the arithmetic mean of the concentrations of equal volume samples collected during any calendar day or sampling period.

A "**one week period**" (or "**calendar-week**") is defined as the period from Sunday through Saturday. For reporting purposes, a calendar week that contains a change of month shall be considered part of the latter month.

The "**weekly average concentration**", is the arithmetic mean of all the composite samples collected in a one-week period. The permittee must report the highest weekly average in the one-month period.

The "**weekly average amount**", shall be determined by the summation of all the measured daily discharges by weight divided by the number of days during the calendar week when the measurements were made.

The "**monthly average concentration**", other than for fecal coliform bacteria, is the arithmetic mean of all the composite or grab samples collected in a one-calendar month period.

The "**monthly average amount**", shall be determined by the summation of all the measured daily discharges by weight divided by the number of days during the calendar month when the measurements were made.

A "**composite sample**" is a combination of not less than 8 influent or effluent portions, of at least 100 ml, collected over a 24-hour period. Under certain circumstances a lesser time period may be allowed, but in no case, less than 8 hours.

A "**grab sample**" is a single influent or effluent sample collected at a particular time.

The "**geometric mean**" of any set of values is the n^{th} root of the product of the individual values where N is equal to the number of individual values. The geometric mean is equivalent to the antilog of the arithmetic mean of the logarithms of the individual values. For the purposes of calculating the geometric mean, values of zero (0) shall be considered to be one (1).

A "**calendar day**" is defined as any 24-hour period.

A "**quarter**" is defined as any one of the following three-month periods: January 1 through March 31, April 1 through June 30, July 1 through September 30, and/or October 1 through December 31.

A "**bypass**" is defined as the intentional diversion of waste streams from any portion of a treatment facility.

A "**dry weather overflow event**" is defined as one day or any portion of a day in which discharge of wastewater from the collection or treatment system other than through the permitted outfall occurs and is not directly related to a rainfall event. Discharge from more than one point within a 24-hour period shall be counted as separate events.

A "**rainfall event**" is defined as any occurrence of rain, preceded by 10 hours without precipitation that results in an accumulation of 0.01 inches or more. Instances of rainfall occurring within 10 hours of each other will be considered a single rainfall event.

A "**sanitary sewer overflow event**" is defined as an unpermitted discharge of wastewater from the collection or treatment system other than through the permitted outfall that is directly related to a specific rainfall event. Multiple discharge occurrences within a single rainfall event are considered a single sanitary sewer overflow event.

D. REPORTING

1. Monitoring Results

Monitoring results shall be recorded monthly and submitted monthly using Discharge Monitoring Report (DMR) forms supplied by the Division of Water Pollution Control. Submittals shall be postmarked no later than 15 days after the completion of the reporting period. The top two copies of each report are to be submitted. A copy should be retained for the permittee's files. DMRs and any communication regarding compliance with the conditions of this permit must be sent to:

**TENNESSEE DEPT. OF ENVIRONMENT & CONSERVATION
DIVISION OF WATER POLLUTION CONTROL
COMPLIANCE REVIEW SECTION
401 CHURCH STREET
L & C ANNEX 6TH FLOOR
NASHVILLE TN 37243-1534**

The first DMR is due on the 15th of the month following permit effectiveness.

DMRs and any other report or information submitted to the Division must be signed and certified by a responsible corporate officer as defined in 40 CFR 122.22, a general partner or proprietor, or a principal municipal executive officer or ranking elected official, or his duly authorized representative. Such authorization must be submitted in writing and must explain the duties and responsibilities of the authorized representative.

2. Additional Monitoring by Permittee

If the permittee monitors any pollutant specifically limited by this permit more frequently than required at the location(s) designated, using approved analytical methods as specified herein, the results of such monitoring shall be included in the calculation and reporting of the values required in the DMR form. Such increased frequency shall also be indicated on the form.

3. Falsifying Results and/or Reports

Knowingly making any false statement on any report required by this permit or falsifying any result may result in the imposition of criminal penalties as provided for in Section 309 of the Federal Water Pollution Control Act, as amended, and in Section 69-3-115 of the Tennessee Water Quality Control Act.

4. Monthly Report of Operation

Monthly operational reports shall be submitted on standard forms to the appropriate Division of Water Pollution Control Environmental Assistance Center in Jackson, Nashville, Chattanooga, Columbia, Cookeville, Memphis, Johnson City, or Knoxville. Reports shall be submitted by the 15th day of the month following data collection.

5. Bypass and Overflow Reporting

a. Report Requirements

A summary report of known or suspected instances of overflows in the collection system or bypass of wastewater treatment facilities shall accompany the Discharge Monitoring Report. The report must contain the date and duration of the instances of overflow and/or bypassing and the estimated quantity of wastewater discharged and/or bypassed.

The report must also detail activities undertaken during the reporting period to (1) determine if overflow is occurring in the collection system, (2) correct those known or suspected overflow points and (3) prevent future or possible overflows and any resulting bypassing at the treatment facility.

On the DMR, the permittee must report the number of sanitary sewer overflows, dry-weather overflows and in-plant bypasses separately. Three lines must be used on the DMR form, one for sanitary sewer overflows, one for dry-weather overflows and one for in-plant bypasses.

b. Anticipated Bypass Notification

If, because of unavoidable maintenance or construction, the permittee has need to create an in-plant bypass which would cause an effluent violation, the permittee must notify the Division as soon as possible, but in any case, no later than 10 days prior to the date of the bypass.

6. Reporting Less Than Detection

A permit limit may be less than the accepted detection level. If the samples are below the detection level, then report "BDL" or "NODI =B" on the DMRs. The permittee must use the correct detection levels in all analytical testing required in the permit. The required detection levels are listed in the Rules of the Department of Environment and Conservation, Division of Water Pollution Control, Chapter 1200-4-3-.05(8).

For example, if the limit is 0.02 mg/l with a detection level of 0.05 mg/l and detection is shown; 0.05 mg/l must be reported. In contrast, if nothing is detected reporting "BDL" or "NODI =B" is acceptable.

E. COMPLIANCE WITH SECTION 208

The limits and conditions in this permit shall require compliance with an area-wide waste treatment plan (208 Water Quality Management Plan) where such approved plan is applicable.

F. REOPENER CLAUSE

This permit shall be modified, or alternatively revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 307(a)(2) and 405(d)(2)(D) of the Clean Water Act, as amended, if the effluent standard, limitation or sludge disposal requirement so issued or approved:

1. Contains different conditions or is otherwise more stringent than any condition in the permit; or
2. Controls any pollutant or disposal method not addressed in the permit.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Act then applicable.

Additionally, this permit shall be modified, or alternatively revoked and reissued, to comply with any TMDL that is established during the term of this permit.

PART II

A. GENERAL PROVISIONS

1. Duty to Reapply

Permittee is not authorized to discharge after the expiration date of this permit. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit such information and forms as are required to the Director of Water Pollution Control (the "Director") no later than 180 days prior to the expiration date. Such forms shall be properly signed and certified.

2. Right of Entry

The permittee shall allow the Director, the Regional Administrator of the U.S. Environmental Protection Agency, or their authorized representatives, upon the presentation of credentials:

- a. To enter upon the permittee's premises where an effluent source is located or where records are required to be kept under the terms and conditions of this permit, and at reasonable times to copy these records;
- b. To inspect at reasonable times any monitoring equipment or method or any collection, treatment, pollution management, or discharge facilities required under this permit; and
- c. To sample at reasonable times any discharge of pollutants.

3. Availability of Reports

Except for data determined to be confidential under Section 308 of the Federal Water Pollution Control Act, as amended, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Division of Water Pollution Control. As required by the Federal Act, effluent data shall not be considered confidential.

4. Proper Operation and Maintenance

- a. The permittee shall at all times properly operate and maintain all facilities and systems (and related appurtenances) for collection and treatment which are installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory and process controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems, which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit. Backup continuous pH and flow monitoring equipment are not required.

- b. Dilution water shall not be added to comply with effluent requirements to achieve BCT, BPT, BAT and or other technology based effluent limitations such as those in State of Tennessee Rule 1200-4-5-.03.

5. Treatment Facility Failure (Industrial Sources)

The permittee, in order to maintain compliance with this permit, shall control production, all discharges, or both, upon reduction, loss, or failure of the treatment facility, until the facility is restored or an alternative method of treatment is provided. This requirement applies in such situations as the reduction, loss, or failure of the primary source of power.

6. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations.

7. Severability

The provisions of this permit are severable. If any provision of this permit due to any circumstance, is held invalid, then the application of such provision to other circumstances and to the remainder of this permit shall not be affected thereby.

8. Other Information

If the permittee becomes aware that he failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, then he shall promptly submit such facts or information.

B. CHANGES AFFECTING THE PERMIT

1. Planned Changes

The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

- a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
- b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants, which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1).

2. Permit Modification, Revocation, or Termination

- a. This permit may be modified, revoked and reissued, or terminated for cause as described in 40 CFR 122.62 and 122.64, Federal Register, Volume 49, No. 188 (Wednesday, September 26, 1984), as amended.
- b. The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.
- c. If any applicable effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established for any toxic pollutant under Section 307(a) of the Federal Water Pollution Control Act, as amended, the Director shall modify or revoke and reissue the permit to conform to the prohibition or to the effluent standard, providing that the effluent standard is more stringent than the limitation in the permit on the toxic pollutant. The permittee shall comply with these effluent standards or prohibitions within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified or revoked and reissued to incorporate the requirement.
- d. The filing of a request by the permittee for a modification, revocation, reissuance, termination, or notification of planned changes or anticipated noncompliance does not halt any permit condition.

3. Change of Ownership

This permit may be transferred to another party (provided there are neither modifications to the facility or its operations, nor any other changes which might affect the permit limits and conditions contained in the permit) by the permittee if:

- a. The permittee notifies the Director of the proposed transfer at least 30 days in advance of the proposed transfer date;
- b. The notice includes a written agreement between the existing and new permittees containing a specified date for transfer of permit responsibility, coverage, and liability between them; and
- c. The Director, within 30 days, does not notify the current permittee and the new permittee of his intent to modify, revoke or reissue, or terminate the permit and to require that a new application be filed rather than agreeing to the transfer of the permit.

Pursuant to the requirements of 40 CFR 122.61, concerning transfer of ownership, the permittee must provide the following information to the Division in their formal notice of intent to transfer ownership: 1) the NPDES permit number of the subject permit; 2) the effective date of the proposed transfer; 3) the name and address of the transferor; 4) the name and address of the transferee; 5) the names of the responsible parties for both the transferor and transferee; 6)

a statement that the transferee assumes responsibility for the subject NPDES permit; 7) a statement that the transferor relinquishes responsibility for the subject NPDES permit; 8) the signatures of the responsible parties for both the transferor and transferee pursuant to the requirements of 40 CFR 122.22(a), "Signatories to permit applications"; and, 9) a statement regarding any proposed modifications to the facility, its operations, or any other changes which might affect the permit limits and conditions contained in the permit.

4. Change of Mailing Address

The permittee shall promptly provide to the Director written notice of any change of mailing address. In the absence of such notice the original address of the permittee will be assumed to be correct.

C. NONCOMPLIANCE

1. Effect of Noncompliance

All discharges shall be consistent with the terms and conditions of this permit. Any permit noncompliance constitutes a violation of applicable State and Federal laws and is grounds for enforcement action, permit termination, permit modification, or denial of permit reissuance.

2. Reporting of Noncompliance

a. 24-Hour Reporting

In the case of any noncompliance which could cause a threat to public drinking supplies, or any other discharge which could constitute a threat to human health or the environment, the required notice of non-compliance shall be provided to the Division of Water Pollution Control in the appropriate Environmental Assistance Center within 24-hours from the time the permittee becomes aware of the circumstances. (The Environmental Assistance Center should be contacted for names and phone numbers of environmental response team).

A written submission must be provided within five days of the time the permittee becomes aware of the circumstances unless the Director on a case-by-case basis waives this requirement. The permittee shall provide the Director with the following information:

- i. A description of the discharge and cause of noncompliance;
- ii. The period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue; and
- iii. The steps being taken to reduce, eliminate, and prevent recurrence of the noncomplying discharge.

b. Scheduled Reporting

For instances of noncompliance which are not reported under subparagraph 2.a above, the permittee shall report the noncompliance on the Discharge Monitoring Report. The report shall contain all information concerning the steps taken, or planned, to reduce, eliminate, and prevent recurrence of the violation and the anticipated time the violation is expected to continue.

3. Overflow

- a. **"Overflow"** means the discharge of wastes from any portion of the collection, transmission, or treatment system other than through permitted outfalls. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of an overflow. Severe property damage does not mean economic loss caused by delays in production.
- b. Overflows are prohibited.
- c. The permittee shall operate the collection system so as to avoid overflows. No new or additional flows shall be added upstream of any point in the collection system, which experiences chronic overflows (greater than 5 events per year) or would otherwise overload any portion of the system. Unless there is specific enforcement action to the contrary, the permittee is relieved of this requirement after: 1) an authorized representative of the Commissioner of the Department of Environment and Conservation has approved an engineering report and construction plans and specifications prepared in accordance with accepted engineering practices for correction of the problem; 2) the correction work is underway; and 3) the cumulative, peak-design, flows potentially added from new connections and line extensions upstream of any chronic bypass point are less than or proportional to the amount of inflow and infiltration removal documented upstream of that point. The inflow and infiltration reduction must be measured by the permittee using practices that are customary in the flow measurement industry and reported in an attachment to a Monthly Operating Report submitted to the local TDEC Environmental Assistance Center. The data measurement period shall be sufficient to account for seasonal rainfall patterns and seasonal groundwater table elevations. In the event that more than 5 overflows have occurred from a single point in the collection system for reasons that may not warrant the self-imposed moratorium or completion of the actions identified in this paragraph, the permittee may request a meeting with the Division of Water Pollution Control EAC staff to petition for a waiver based on mitigating evidence.

4. Upset

- a. **"Upset"** means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities,

inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

- b. An upset shall constitute an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the permittee demonstrates, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - i. An upset occurred and that the permittee can identify the cause(s) of the upset;
 - ii. The permitted facility was at the time being operated in a prudent and workman-like manner and in compliance with proper operation and maintenance procedures;
 - iii. The permittee submitted information required under "Reporting of Noncompliance" within 24-hours of becoming aware of the upset (if this information is provided orally, a written submission must be provided within five days); and
 - iv. The permittee complied with any remedial measures required under "Adverse Impact."

5. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to the waters of Tennessee resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

6. Bypass

- a. "**Bypass**" is the intentional diversion of wastewater away from any portion of a treatment facility.
- b. Bypasses are prohibited unless all of the following three (3) conditions are met:
 - i. The bypass is unavoidable to prevent loss of life, personal injury, or severe property damage;
 - ii. There are not feasible alternatives to bypass, such as the construction and use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance;

- iii. The permittee submits notice of an unanticipated bypass to the Division of Water Pollution Control in the appropriate environmental assistance center within 24-hours of becoming aware of the bypass (if this information is provided orally, a written submission must be provided within five days). When the need for the bypass is foreseeable, prior notification shall be submitted to the Director, if possible, at least ten (10) days before the date of the bypass.
- c. Bypasses not exceeding permit limitations are allowed **only** if the bypass is necessary for essential maintenance to assure efficient operation. All other bypasses are prohibited. Allowable bypasses not exceeding limitations are not subject to the reporting requirements of 6.b.iii, above.

7. Washout

- a. For domestic wastewater plants only, a "washout" shall be defined as loss of Mixed Liquor Suspended Solids (MLSS) of 30.00% or more. This refers to the MLSS in the aeration basin(s) only. This does not include MLSS decrease due to solids wasting to the sludge disposal system. A washout can be caused by improper operation or from peak flows due to infiltration and inflow.
- b. A washout is prohibited. If a washout occurs the permittee must report the incident to the Division of Water Pollution Control in the appropriate Environmental Assistance Center within 24-hours by telephone. A written submission must be provided within five days. The washout must be noted on the discharge monitoring report. Each day of a washout is a separate violation.

D. LIABILITIES

1. Civil and Criminal Liability

Except as provided in permit conditions for "***Bypassing***," "***Overflow***," "***Upset***," "***Diversion***," and "***Treatment Facility Failures***," nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Notwithstanding this permit, the permittee shall remain liable for any damages sustained by the State of Tennessee, including but not limited to fish kills and losses of aquatic life and/or wildlife, as a result of the discharge of wastewater to any surface or subsurface waters. Additionally, notwithstanding this Permit, it shall be the responsibility of the permittee to conduct its wastewater treatment and/or discharge activities in a manner such that public or private nuisances or health hazards will not be created.

2. Liability Under State Law

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or the Federal Water Pollution Control Act, as amended.

PART III

OTHER REQUIREMENTS

A. CERTIFIED OPERATOR

The waste treatment facilities shall be operated under the supervision of a Grade III certified wastewater treatment operator and the collection system operated under the supervision of a Grade I Collection System certified operator in accordance with the Water Environmental Health Act of 1984.

B. POTW PRETREATMENT PROGRAM GENERAL PROVISIONS

As an update of information previously submitted to the Division, the permittee will undertake the following activity.

1. The permittee shall submit the results of an Industrial Waste Survey (IWS) in accordance with 40 CFR 403.8(f)(2)(i), including any industrial users (IU) covered under Section 310(i)(2) of the Act. As much information as possible must be obtained relative to the character and volume of pollutants contributed to the POTW by the IUs. This information will be submitted to the Division of Water Pollution Control, Pretreatment section within one hundred twenty (120) days of the effective date of this permit. Development of a pretreatment program may be required after completion of the industrial user review. All requirements and conditions of the pretreatment program are enforceable through the NPDES permit.
2. The permittee shall enforce 40 CFR 403.5, "prohibited discharges". Pollutants introduced into the POTW by a non-domestic source shall not cause pass through or interference as defined in 40 CFR Part 403.3. These general prohibitions and the specific prohibitions in this section apply to all non-domestic sources introducing pollutants into the POTW whether the source is subject to other National Pretreatment Standards or any State or local Pretreatment Requirements.

Specific prohibitions. Under no circumstances shall the permittee allow introduction of the following wastes in the waste treatment system:

- a. Pollutants which create a fire or explosion hazard in the POTW;
- b. Pollutants which will cause corrosive structural damage to the treatment works, but in no case discharges with pH less than 5.0 unless the system is specifically designed to accept such discharges.
- c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the treatment system resulting in interference.

- d. Any pollutant, including oxygen-demanding pollutants (BOD, etc.) released in a discharge at a flow rate and/or pollutant concentration which will cause interference with the treatment works.
 - e. Heat in amounts which will inhibit biological activity in the treatment works resulting in interference, but in no case heat in such quantities that the temperature at the treatment works exceeds 40°C (104°F) unless the works are designed to accommodate such heat.
 - f. Any priority pollutant in amounts that will contaminate the treatment works sludge.
 - g. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;
 - h. Pollutants which result in the presence of toxic gases, vapors or fumes within the POTW in a quantity that may cause acute worker health and safety problems;
 - i. Any trucked or hauled pollutants except at discharge points designated by the POTW.
3. The permittee shall notify the Tennessee Division of Water Pollution Control of any of the following changes in user discharge to the system no later than 30 days prior to change of discharge:
- a. New introductions into such works of pollutants from any source which would be a new source as defined in Section 306 of the Act if such source were discharging pollutants.
 - b. New introductions of pollutants into such works from a source which would be subject to Section 301 of the "Federal Water Quality Act as Amended" if it were discharging such pollutants.
 - c. A substantial change in volume or character of pollutants being introduced into such works by a source already discharging pollutants into such works at the time the permit is issued.

This notice will include information on the quantity and quality of the wastewater introduced by the new source into the publicly owned treatment works, and on any anticipated impact on the effluent discharged from such works. If this discharge necessitates a revision of the current NPDES permit or pass-through guidelines, discharge by this source is prohibited until the Tennessee Division of Water Pollution Control gives final authorization.

C. SLUDGE MANAGEMENT PRACTICES

1. The permittee must comply with 40 CFR 503 et seq. Sludge shall be sampled and analyzed at a frequency dependant both on the amount of sludge generated annually and on the disposal practice utilized. Whenever sampling and analysis are required of 40 CFR 503, the permittee shall report to the Division the quantitative data for the following parameters:

1)	Arsenic	7)	Nickel
2)	Cadmium	8)	Selenium
3)	Copper	9)	Zinc
4)	Lead	10)	Nitrite plus Nitrate, NO ₂ , + NO ₃ as N
5)	Mercury	11)	Total Kjeldahl Nitrogen, as N
6)	Molybdenum	12)	Ammonia, NH ₃ , as N

This sludge analysis must be submitted by February 19th of each calendar year. This information shall be submitted to the Division of Water Pollution Control, Central Office, 401 Church Street, 6th Floor Annex, Nashville TN 37243-1534, Attention: Sludge Coordinator, Municipal Facilities Section.

2. Land application of sludge shall halt immediately if any of the following concentrations are exceeded:

POLLUTANT	CONCENTRATION (mg/kg ¹)
Arsenic	75
Cadmium	85
Zinc	7500
Copper	4300
Lead	840

POLLUTANT	CONCENTRATION (mg/kg ¹)
Mercury	57
Molybdenum	75
Nickel	420
Selenium	100

1 Dry Weight Basis

- a) Monthly average pollutant concentrations shall not exceed Table 3 of 40 CFR §503.13. If they are exceeded cumulative pollutant loading rates are to be calculated and recorded and shall not exceed Table 2 of 40 CFR §503.13 for the life of the land application site.
3. If land application is the final disposition of the wasted sludge, the permittee shall provide pathogen reduction, sludge stabilization and comply with land and crop usage controls as listed in 40 CFR Part 503, as authorized by the Clean Water Act. Records must be maintained by the permittee that indicates compliance or non-compliance with this rule. If the permittee is required to report to EPA, copies of all reports should be sent to the Division, at the address listed in paragraph 1 of this section.
 4. Before land applying municipal sludge the permittee must obtain approvals for each site(s) in writing from the Division using the latest revision of Guidelines for

Land Application or Surface Disposal of Biosolids, unless the sludge being land applied meets the pollutant concentrations of 40 CFR 503.13(b)(3), the Class A pathogen requirements in 40 CFR 503.32(a), and one of the vector attraction reduction requirements in 40 CFR 503.33 (b)(1) through (b)(8).

5. Reopener: If an applicable "acceptable management practice" or numerical limitation for pollutants in sewage sludge promulgated under Section 405(d)(2) of the Clean Water Act, as amended by the Water Quality Act of 1987, is more stringent than the sludge pollutant limit or acceptable management practice in this permit, or controls a pollutant not limited in this permit, this permit shall be promptly modified or revoked and reissued to conform to the requirements promulgated under Section 405(d)(2). The permittee shall comply with the limitations by no later than the compliance deadline specified in the applicable regulations as required by Section 405(d)(2) of the Clean Water Act.
6. Notice of change in sludge disposal practice: The permittee shall give prior notice to the Director of any change planned in the permittee's sludge disposal practice. If land application activities are suspended permanently and sludge disposal moves to a municipal solid waste landfill, the permittee shall contact the local Division of Solid Waste Management office address for other permitting and approvals (see table below):

Division of Solid Waste Management			
Office	Location	Zip Code	Phone No.
Chattanooga	540 McCallie Avenue, Suite 550	37402-2013	(423) 634-5745
Jackson	362 Carriage House Drive	38305-2222	(901) 512-1300
Cookeville	1221 South Willow Avenue	38506	(931) 432-4015
Columbia	2484 Park Plus Drive	38401	(931) 380-3371
Johnson City	2305 Silverdale Road	37601	(423) 854-5400
Knoxville	2700 Middlebrook Pike, Suite 220	37921	(865) 594-6035
Memphis	2510 Mt. Moriah Road, Suite E-645	38115-1511	(901) 368-7939
Nashville	711 R.S. Gass Boulevard	37243-1550	(615) 687-7000

D. PLACEMENT OF SIGNS

Within sixty (60) days of the effective date of this permit, the permittee shall place and maintain a sign(s) at each outfall and any bypass/overflow point in the collection system. For the purposes of this requirement, any bypass/overflow point that has discharged five (5) or more times in the last year must be so posted. The sign(s) should be clearly visible to the public from the bank and the receiving stream. The minimum sign size should be two feet by two feet (2' x 2') with one-inch (1") letters. The sign should be made of durable material and have a white background with black letters.

The sign(s) are to provide notice to the public as to the nature of the discharge and, in the case of the permitted outfalls, that the discharge is regulated by the Tennessee Department of Environment and Conservation, Division of Water Pollution Control. The following is given as an example of the minimal amount of information that must be included on the sign:

Permitted CSO or unpermitted bypass/overflow point:

UNTREATED WASTEWATER DISCHARGE POINT
Lynwood Utility STP
()
NPDES Permit NO. TN0029718
TENNESSEE DIVISION OF WATER POLLUTION CONTROL
1-888-891-8332 WPC ENVIRONMENTAL ASSISTANCE CENTER

NPDES Permitted Municipal/Sanitary Outfall:

TREATED MUNICIPAL/SANITARY WASTEWATER
Lynwood Utility STP
()
NPDES Permit NO. TN0029718
TENNESSEE DIVISION OF WATER POLLUTION CONTROL
1-888-891-8332 WPC ENVIRONMENTAL ASSISTANCE CENTER

No later than sixty (60) days from the effective date of this permit, the permittee shall have the above sign(s) on display in the location specified.

E. CHLORINE RESIDUAL COMPLIANCE

This permit contains a residual chlorine limit of 0.03 mg/l based on the instream protection value of 0.019 mg/l for fish and aquatic life. The current limit of detection for residual chlorine is 0.05 mg/l. The Permittee shall obtain the equipment that is necessary to test for residual chlorine down to the detection level. Detection of chlorine in any test will constitute a violation of the permit.

Three methods that are specified in 40 CFR Part 136 will yield results at the 0.05 mg/l detection level. These methods are amperometric titration, DPD colorimetric and specific ion electrode.

F. ANTIDEGRADATION

Pursuant to the Rules of the Tennessee Department of Environment and Conservation, Chapter 1200-4-3-.06, titled "Tennessee Antidegradation Statement," and in consideration of the Department's directive in attaining the greatest degree of effluent reduction achievable in municipal, industrial, and other wastes, the permittee shall further be required, pursuant to the terms and conditions of this permit, to comply with the effluent limitations and schedules of compliance required to implement applicable water quality standards, to comply with a State Water Quality Plan or other State or Federal laws or regulations, or where practicable, to comply with a standard permitting no discharge of pollutants.

G. RESERVE SEWER CAPACITY

This permit requires that 125,000 gpd of Lynwood's total increased capacity of 400,000 gpd be reserved for the use of the approximate 419 homes in the Hillsboro Acres, Meadowgreen and Farmington Subdivisions (Subdivisions).

The 125,000 gpd capacity in reserve for the Subdivisions may only be reallocated at the discretion of the Division.

The Division acknowledges that Petitioner initiated negotiations with the representatives of the Subdivisions. The Division believes that the reserved capacity for the Subdivisions should be continued for a reasonable time to allow the residents of the Subdivisions, the Williamson County government and Lynwood to continue to negotiate in good faith and attempt to reach an agreement for the provision of sewer service for the Subdivisions.

Should such an agreement not be reached, then Lynwood U.C. may request that the Division relieve it from the requirement to reserve 125,000 gpd of capacity for homes in the Subdivisions. The request must be in writing and contain adequate documentation of the efforts made by Lynwood U.C. to reach an agreement with the Subdivisions.

H. PLANT IMPROVEMENTS

This permit requires that facility and operational improvements be made such that Lynwood consistently complies with the terms of this permit. Until such time as the improvements are made and Lynwood demonstrates consistent compliance with this permit, no new connections to the system are allowed except as provided in (a – f) below. New connections are defined as connections for homes or businesses that, as of the date of this permit, are not yet under construction.

- (a) Fifteen (15) new connections will be allowed as of the issuance date of the Permit. All Fifteen (15) of these connections will be reserved for homes in River Landing or Chapelwood subdivisions.
- (b) Thirty (30) additional new connections will be allowed upon the date Lynwood commences construction of the approved Modifications.
- (c) Fifteen (15) additional new connections will be allowed six (6) months following the commencement of construction of the Modifications.
- (d) Ten (10) additional new connections will be allowed upon substantial completion of the Modifications. For purposes of this provision, the term "substantial completion" shall be defined as the completion of the Modifications in accordance with the approval plans to the point where the Modifications are capable of removing Nitrogen from influent to the levels prescribed by the Permit. However, it is understood and agreed that certain non-operational portions of the Modifications (such as painting, final grading, etc.) may still be underway, but shall not prevent the Modifications from being considered substantially complete.

- (e) The above-referenced schedule for new connections will be suspended during any period of time in which Lynwood is not in substantial compliance of the Permit and may only be reinstated with the approval of the Director of Water Pollution Control, which approval will not be unreasonably withheld, conditioned or delayed. New connections are defined as those that do not have building permits or upon which construction has not commenced as of the date of this order.
- (f) The Moratorium shall be terminated by the Division of Water Pollution Control (the "Division") at such time as the Modifications are fully completed, operational and Lynwood is in substantial compliance of the Permit.

The necessary improvements include physical upgrades to the influent pump station and addition of equipment necessary for compliance with the effluent nitrogen limit. Operational changes necessary for compliance with other effluent limits should be made without delay.

All physical improvements necessary for compliance with the total nitrogen limit must be in accordance with the following schedule:

<u>Date(s)</u>	<u>Action</u>
3/03 to 6/03	Pilot Studies (Conventional and Alternative Systems)
3/03 to 7/03	Design of Conventional System
4/15/03	Submit Site Plan for County approval
*6/03 to 10/03	Design of Alternative System
***6/03	County Approval
**7/03	State Approval
8/03 to 8/04	Construction (Conventional)
8/04 to 11/04	Start-Up (Conventional)
*11/03 to 11/04	Construction (Alternative)
*11/04 to 2/05	Start-Up (Alternative)
11/04	Completion (Conventional)
**12/03	State Approval (Alternative)
*2/05	Completion (Alternative)

- * Alternative System to be designed and constructed only if County fails to approve flood plain construction for Conventional system
- ** TDEC will review plans and respond within thirty (30) days of receipt.
- *** If County approval is delayed beyond June 30, 2003, subsequent action dates will be extended one day for each day such approval is delayed.

RATIONALE ADDENDUM 2

Lynwood Utility STP

NPDES PERMIT No. TN0029718

11/19/2003

Permit Writer: Saya Qualls

I. CHANGES TO THE PERMIT

This addendum provides rationale for changes made to resolve Lynwood's appeal of the permit issued on July 15, 2002. On April 22, 2003, attorneys representing Lynwood, TDEC and the Lumsden Bend Property Owners (interveners in the appeal) presented an agreed order that proposed permit modifications to the Water Quality Control Board. The board, in turn, approved the agreed order and thus, instructed the division to modify the permit accordingly.

The following is an excerpt from the April 22, 2003, order and serves as a basis for the changes proposed.

WHEREFORE, PREMISES CONSIDERED, it is hereby ORDERED by the Water Quality

Control Board as follows:

1. *Effective as of the date of this Order, the Compliance Schedule imposed by Part III Section H and as reflected in the Rationale Addendum Section 1 of the Permit shall be modified as follows:*

Compliance Schedule for Nitrogen Removal

<u><i>Date(s)</i></u>	<u><i>Action</i></u>
<i>3/03 to 6/03</i>	<i>Pilot Studies (Conventional and Alternative Systems)</i>
<i>3/03 to 7/03</i>	<i>Design of Conventional System</i>
<i>4/15/03</i>	<i>Submit Site Plan for County approval</i>
<i>*6/03 to 10/03</i>	<i>Design of Alternative System</i>
<i>***6/03</i>	<i>County Approval</i>
<i>**7/03</i>	<i>State Approval</i>

8/03 to 8/04	Construction (Conventional)
8/04 to 11/04	Start-Up (Conventional)
*11/03 to 11/04	Construction (Alternative)
*11/04 to 2/05	Start-Up (Alternative)
11/04	Completion (Conventional)
**12/03	State Approval (Alternative)
*2/05	Completion (Alternative)

- * *Alternative System to be designed and constructed only if County fails to approve flood plain construction for Conventional system*
- ** *TDEC will review plans and respond within thirty (30) days of receipt.*
- *** *If County approval is delayed beyond June 30, 2003, subsequent action dates will be extended one day for each day such approval is delayed.*

2. *Moratorium*

Effective as of the date of this Order, the Moratorium imposed by Part III Section H and Rationale Addendum Section I (3) of the Permit shall be modified as follows:

- (a) *Fifteen (15) new connections will be allowed as of the issuance date of the Permit. All Fifteen (15) of these connections will be reserved for homes in River Landing or Chapelwood subdivisions.*
- (b) *Thirty (30) additional new connections will be allowed upon the date Lynwood commences construction of the approved Modifications.*
- (c) *Fifteen (15) additional new connections will be allowed six (6) months following the commencement of construction of the Modifications.*
- (d) *Ten (10) additional new connections will be allowed upon substantial completion of the Modifications. For purposes of this provision, the term "substantial completion" shall be defined as the completion of the Modifications in accordance with the approval plans to the point where the Modifications are capable of removing Nitrogen from influent to the levels prescribed by the Permit. However, it is understood and agreed that certain non-operational portions of the Modifications (such as painting, final grading, etc.) may still be underway, but shall not prevent the Modifications from being considered substantially complete.*
- (e) *The above-referenced schedule for new connections will be suspended during any period of time in which Lynwood is not in substantial compliance of the*

Permit and may only be reinstated with the approval of the Director of Water Pollution Control, which approval will not be unreasonably withheld, conditioned or delayed. New connections are defined as those lots for which building permits have not been issued or upon which construction has not commenced as of the date of this order.

(f) The Moratorium shall be terminated by the Division at such time as the Modifications are fully completed, operational and Lynwood is in substantial compliance of the Permit.

3. Part III, Section G of the Permit should be revised as follows: Delete the third paragraph of Section G (begins with, "Within sixty days"...) and insert in its place the following:

The Division acknowledges that Petitioner initiated negotiations with the representatives of the Subdivisions. The Division believes that the reserved capacity for the Subdivisions should be continued for a reasonable time to allow the residents of the Subdivisions, the Williamson County government and Lynwood to continue to negotiate in good faith and attempt to reach an agreement for the provision of sewer service for the Subdivisions.

RATIONALE ADDENDUM

Lynwood Utility STP

NPDES PERMIT No. TN0029718

11/19/2003

Permit Writer: Saya Qualls

I. CHANGES TO THE PERMIT

This addendum provides rationale for changes made to the final permit.

1. The monthly average effluent nitrogen concentration limit is changed to 3.0 mg/l as in the previous permit due to anti-backsliding. The corresponding monthly average loading, weekly average concentration and loading and daily maximum concentration limits are also changed.
2. The overflow language of Part III, paragraph C.3.b has been changed to conform to a recent state/EPA agreement on overflows.
3. A review of DMR data from June 1999 through April 2002 revealed over 50 violations including raw sewage overflows. For this reason, the division will prohibit new connections until the permittee demonstrates substantial compliance with all terms and conditions of the permit. Additionally, the division will require that the influent pump station be upgraded in order to minimize the risk of failure and overflow. The schedule for the improvements is as follows:

August 15, 2002	Submittal of conceptual plan to Water Pollution Control
December 31, 2002	Submittal of detailed plans and specifications
April 30, 2003	Completion of all work.

RATIONALE

Lynwood Utility STP

NPDES PERMIT No. TN0029718

11/19/2003

Permit Writer: Saya Qualls

I. DISCHARGER

NAME: Lynwood Utility STP
REPRESENTATIVE: Davis Lamb
LOCATION: Franklin, Williamson County, Tennessee
PHONE NUMBER: (615) 661-6055
WATERSHED: Harpeth HUC: 5130204
WASTEWATER: treated domestic wastewater from Outfall 001
Discharge number: 001
Average design flow: 0.4 MGD
Industrial flow: %
PRESENT TREATMENT: Extended Aeration
STATUS: Reissuance

II. RECEIVING WATERS

STREAM: Harpeth River at mile 77.9
LOW FLOW: 7Q10 = 0.83 MGD (1.28 CFS)
ESTABLISHED FROM: USGS Water-Resources Investigation Report 95-4293
Station #03432350 plus calculated flow from an additional 145
square miles
CLASSIFICATION: Fish and aquatic life, recreation, irrigation, livestock watering and
wildlife.
WATER QUALITY STATUS: The Harpeth River at mile 77.9 is considered fully
supportive of its designated use classifications according
to the 303(d) List of September 1998 and the 2000 305(b)
assessment. However, this facility is located just
downstream from water bodies that are impaired for,
among other things, organic enrichment/D.O.
TIER DESIGNATION: Tier I

III. PREVIOUS PERMIT

Issued: **5/14/99**
Expires: **7/31/01**

PARAMETERS	MONTHLY AVERAGE CONCENTRATION (MG/L)	MAXIMUM CONCENTRATION (MG/L)
CBOD ₅ (May 1- Oct. 31)	5	10
CBOD ₅ (Nov. 1- April 30)	10	20
NH ₃ -N (May 1- Oct. 31)	2	4
NH ₃ -N (Nov. 1- April 30)	5	10
Total Nitrogen as N (May 1- Oct. 31)	3	
Total Suspended Solids	30	45
Dissolved Oxygen	6.0 (daily minimum)	
Total Chlorine Residual		0.03 (daily maximum)
Fecal Coliform (colonies/100ml)	200	1000
Settleable Solids (ml/l)		1.0 (daily maximum)
pH (standard units)	6.5-8.5	
Flow (MGD):		
Influent	Report	Report
Effluent	Report	Report

Note: Weekly limitations on BOD₅ and TSS concentrations were given as required per 40 CFR 133.105(a)(2) & (b)(2); daily BOD₅ and TSS limitations are authorized by T.C.A. 1200-4-5-.03; monthly and weekly mass loads were limited per 40 CFR 122.45(f) and based on the design flow as per 40 CFR 122.45(b); monthly average percent removal rates for BOD₅ and TSS are required per 40 CFR 133.105(a)(3) and 133.103(c) respectively or per 40 CFR 133.102(a) and (b) respectively.

IV. DMR REVIEW

A DMR survey is attached.

V. PROPOSED EFFLUENT LIMITS & RATIONALE

PARAMETERS	MONTHLY AVERAGE CONCENTRATION, (MG/L)	RATIONALE
CBOD ₅ (May 1- Oct. 31)	5	D.O. protection, Refer to A below
CBOD ₅ (Nov. 1- April 30)	10	D.O. protection, Refer to A below
NH ₃ -N (May 1- Oct. 31)	2	Ammonia Toxicity, Refer to B below
NH ₃ -N (Nov. 1- April 30)	5	Ammonia Toxicity, Refer to B below
Total Nitrogen as N (May 1- Oct. 31)	5	Refer to C
Total Suspended Solids	30	T.C.A. 1200-4-5-.03
Dissolved Oxygen	6.0 (daily minimum)	D.O. protection, Refer to A below
Total Chlorine Residual	0.03 (daily maximum)	Refer to D below
Fecal Coliform (colonies/100ml)	200	T.C.A. 1200-4-3-.03
<i>E. coli</i> (colonies/100ml)	126	T.C.A. 1200-4-3-.03
Settleable Solids (ml/l)	1.0 (daily maximum)	T.C.A. 1200-4-5-.03
pH (standard units)	6.5 -9.0	T.C.A. 1200-4-3-.03
Flow (MGD):		
Influent	Report	Used to quantify pollutant load
Effluent	Report	Used to quantify pollutant load

Note: Weekly limitations on BOD₅ and TSS concentrations are given as required per 40 CFR 133.105(a)(2) & (b)(2); daily BOD₅ and TSS limitations are authorized by T.C.A. 1200-4-5-.03; monthly and weekly mass loads are limited per 40 CFR 122.45(f) and based on the design flow as per 40 CFR 122.45(b); monthly average percent removal rates for BOD₅ and TSS are required per 40 CFR 133.105(a)(3) and 133.103(c) respectively or per 40 CFR 133.102(a) and (b) respectively. A 65%, minimum, removal rate is required for BOD₅ per 40 CFR 133.105(a)(3).

A. CBOD₅ and D.O.

Streeter-Phelps modeling was performed during the previous issuance of this permit at various conditions to determine allowable organic loadings. These limits still apply and are considered sufficient to result in an instream dissolved oxygen concentration that remains above the required minimum of 5.0 mg/l. Modeling results are located in the permit file administrative record.

B. AMMONIA AS N

The ammonia limits are retained from the previous permit in accordance with the anti-backsliding requirements of 40 CFR § 122.44 (I). The previous permit limits were calculated based on ammonia toxicity.

C. TOTAL NITROGEN AS N

The previous permit applied a BPJ limit of 3.0 mg/l for total nitrogen. However, subsequent review of effluent nitrogen data for other POTWs as well as published literature indicates that 5.0 mg/l is a more technologically feasible effluent limit. The limited data available (3.4 mg/l and 4.2 mg/l) for Lynwood's own effluent suggests that the facility has problems complying with the 3.0 mg/l limit.

D. CHLORINATION

The total residual chlorine limit is retained from the previous permit due to the anti-backsliding provision of 40 CFR 122.44(I) that requires a reissued permit to be as stringent as the previous permit.

VI. OTHER REQUIREMENTS & CONDITIONS

A. GRADE III CERTIFIED WASTEWATER TREATMENT OPERATOR

B. GRADE I COLLECTION SYSTEM CERTIFIED OPERATOR

C. PRETREATMENT PROGRAM

The Lynwood Utility STP has received an exemption from development of a pretreatment program due to the lack of any significant industrial users. To keep the exemption, the utility must complete an updated Industrial Waste Survey within 120 days of the effective date of the permit. The utility must notify the Division immediately of its intent to connect a significant industrial user to the sewage system.

D. MINIMUM PERCENT REMOVALS

The treatment facility is required to remove 85 % of the CBOD₅ and TSS that enter the facility on a monthly basis. This is part of the minimum requirement for all municipal treatment facilities contained in Code of Federal Regulations 40 Part 133.102. The reasons stated by the U.S.E.P.A. for these requirements are to achieve these two basic objectives:

- (1) To encourage municipalities to correct excessive inflow and infiltration (I/I) problems in their sanitary sewer systems, and
- (2) To help prevent intentional dilution of the influent wastewater as a means of meeting permit limits.

The treatment facility is required to remove 40 % of the CBOD₅ and TSS that enter the facility on a daily basis. This percent removal will be calculated three times per week and

recorded on the Monthly Operation Report. The number of excursions less than 40% will be reported on the Discharge Monitoring Report.

E. RESERVE SEWER CAPACITY

Within the service area of the Lynwood U.C. are several unsewered homes primarily located in the Farmington, Hillsboro Acres and Meadowgreen Subdivisions. Representatives from the Lynwood U.C. indicated a willingness to provide sewerage services to these existing homes in addition to the new homes to be served as a result of the expansion. This permit requires that 125,000 gpd of capacity be reserved for these existing homes. This reserve capacity may only be reallocated upon authorization from the Division.

F. PERMIT TERM

This permit is being reissued for 5 years in order to coordinate its reissuance with other permits located within the Harpeth Watershed.

VII. COMPLIANCE SCHEDULE SUMMARY

<u>Section</u>	<u>Description</u>
I. D 1	Discharge Monitoring Reports, monthly
I. D 4	Operational reports, monthly
I. D 5	Bypass and Overflow Summary Report, monthly
III. B	Industrial Waste Survey, within 120 days of the effective permit date
III. C	Sludge analysis must be submitted by February 19 th of each calendar year